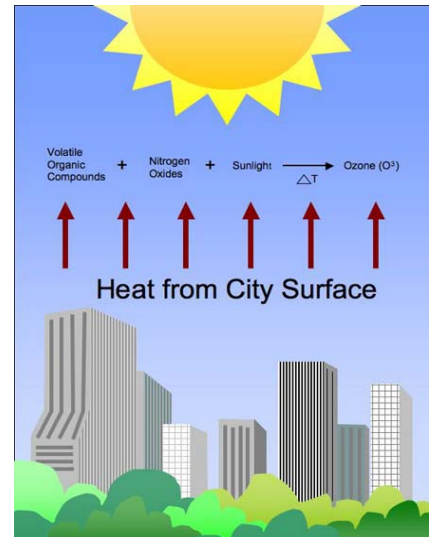




## Conservation Element

CE-A.12. Reduce the San Diego Urban Heat Island, through actions such as:

- Using cool roofing materials, such as reflective, low heat retention tiles, membranes and coatings, or vegetated eco-roofs to reduce heat build-up;
- Planting trees and other vegetation, to provide shade and cool air temperatures. In particular, properly position trees to shade buildings, air conditioning units, and parking lots; and
- Reducing heat build up in parking lots through increased shading or use of cool paving materials as feasible (see also Urban Design Element, Policy UD-A.12).



CE-A.13. Regularly monitor, update and implement the City's Climate Protection Action Plan to ensure, at a minimum compliance with all applicable federal, state and local laws.

*Heat islands contribute to ground level ozone formation or smog.*

Source: [www.epa.gov](http://www.epa.gov)

- a. Inventory greenhouse gas emissions, including emissions for the City community-at-large, and for the City as an organization.
- b. Identify actions and programs designed to reduce the climate change impacts caused by the community-at-large and the City as an organization.

## B. Open Space and Landform Preservation

### Goal

- ◆ Preservation and long-term management of the natural landforms and open spaces that help make San Diego unique.

### Discussion

Open space may be defined as land or water areas that are undeveloped, generally free from development or developed with low-intensity uses that respect natural environmental characteristics and are compatible with open space use. Open space may have utility for: primarily passive park and recreation; conservation of land, water, or other natural biological resources; historic or scenic purposes; visual relief; or landform preservation. San Diego's many canyons, valleys, mesas, hillsides, beaches, and other landforms create a unique setting that fosters biodiversity, a sense of place, and recreational opportunities. Designated parks and open spaces are shown on the General Plan Land Use and Street System Map (see also Land Use Element, Figure LU-2).



San Diego has a long history of planning for open space preservation and protection, including:

- 1868 – The City Board of Trustees set land aside for a City park, later named Balboa Park.
- 1908 – John Nolen's comprehensive plan for San Diego called for development to conform to and respect the natural environment.
- 1972 – The City amended the City Charter Section 103.1a to establish the Environmental Growth Fund, two-thirds of which is to be used to pay principle and interest on bonds issued for the acquisition of open space lands, with the remainder to be used to preserve and enhance the environment of the City.
- 1978 – San Diego voters approved Proposition C which authorized the sale of bonds to purchase open space.
- 1979 – The Progress Guide and General Plan, Open Space Element called for providing an open space system.
- 1987 – The City's Residential Growth Management Program included a policy recommendation to allow topography and environmentally sensitive lands to define the City's urban form.
- 1997 – The Multiple Species Conservation Program (MSCP) was adopted to preserve and manage sensitive species at the ecosystem level through habitat protection.

The City's Environmentally Sensitive Lands (ESL) regulations help protect, preserve, and restore lands containing steep hillsides, sensitive biological resources, coastal beaches, sensitive coastal bluffs, or Special Flood Hazard Areas. The intent of the ESL regulations is to assure that development occurs in a manner that protects the overall quality of the resources, encourages a sensitive form of development, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along the shoreline, and reduces hazards due to flooding in specific areas while minimizing the need for construction of flood control facilities. Steep hillsides are shown on Figure CE-1, Steep Slopes and 200 Foot Contours.

The development regulations and guidelines for environmentally sensitive lands also serve to implement the MSCP by placing priority on the preservation of biological resources within the Multi-Habitat Planning Area (MHPA) (see Figure CE-2, Multi-Habitat Planning Area). The goal of the MSCP is to achieve a sustainable balance between species preservation and smart growth by identifying areas for habitat/species protection (within the MHPA) and areas for development (outside the MHPA), as further discussed in Section G.

The City's parks, open space, trails and pedestrian linkages are part of an integrated system that connect with regional and state resources and provide opportunities for residents and visitors to experience San Diego's open spaces. The Recreation Element describes the attributes of designated and dedicated park and open space lands for the provision of outdoor recreation. Some important open space areas are not preserved as dedicated park land, but are protected through regulations or other private property restrictions such as conservation or open space easements.



Open space that is designated in community plans and other land use plans is an important component of the open space system because of its value in protecting natural landforms, defining community boundaries, providing natural linkages between communities, providing visually appealing open spaces, and protecting habitat and biological systems of community importance that are not otherwise included in the MHPA.

### Policies

- CE-B.1. Protect and conserve the landforms, canyon lands, and open spaces that: define the City's urban form; provide public views/vistas; serve as core biological areas and wildlife linkages; are wetlands habitats; provide buffers within and between communities; or provide outdoor recreational opportunities.
- Utilize Environmental Growth Funds and pursue additional funding for the acquisition and management of MHPA and other important community open space lands.
  - Support the preservation of rural lands and open spaces throughout the region.
  - Protect urban canyons and other important community open spaces including those that have been designated in community plans for the many benefits they offer locally, and regionally as part of a collective citywide open space system (see also Recreation Element, Sections C and F; Urban Design Element, Section A).
  - Minimize or avoid impacts to canyons and other environmentally sensitive lands, by relocating sewer infrastructure out of these areas where possible, minimizing construction of new sewer access roads into these areas, and redirecting of sewage discharge away from canyons and other environmentally sensitive lands.
  - Encourage the removal of invasive plant species and the planting of native plants near open space preserves.
  - Pursue formal dedication of existing and future open space areas throughout the City, especially in core biological resource areas of the City's adopted MSCP Subarea Plan.
  - Require sensitive design, construction, relocation, and maintenance of trails to optimize public access and resource conservation.
- CE-B.2. Apply the appropriate zoning and Environmentally Sensitive Lands (ESL) regulations to limit development of floodplains, sensitive biological areas including wetlands, steep hillsides, canyons, and coastal lands.
- Manage watersheds and regulate floodplains to reduce disruption of natural systems, including the flow of sand to the beaches. Where possible and practical, restore water filtration, flood and erosion control, biodiversity and sand replenishment benefits.
  - Limit grading and alterations of steep hillsides, cliffs and shoreline to prevent increased erosion and landform impacts.



- CE-B.3. Use natural landforms and features as integrating elements in project design to complement and accentuate the City's form (see also Urban Design Element, Section A).
- CE-B.4. Limit and control runoff, sedimentation, and erosion both during and after construction activity.
- CE-B.5. Maximize the incorporation of trails and greenways linking local and regional open space and recreation areas into the planning and development review processes.
- CE-B.6. Provide an appropriate defensible space between open space and urban areas through the management of brush, the use of transitional landscaping, and the design of structures (see also Urban Design Element, Policy UD-A.3.o). Continue to implement a citywide brush management system.





# THE CITY OF SAN DIEGO General Plan

## Conservation Element

Figure CE-1

### Steep Slopes and 200 Ft. Contours

- Topographic Contours (200 Ft. Interval)
- Steep Slopes (25% or steeper)

0 1 2 4 6 Miles



MEXICO

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**THE CITY OF SAN DIEGO**  
**General Plan**  
*Conservation Element*

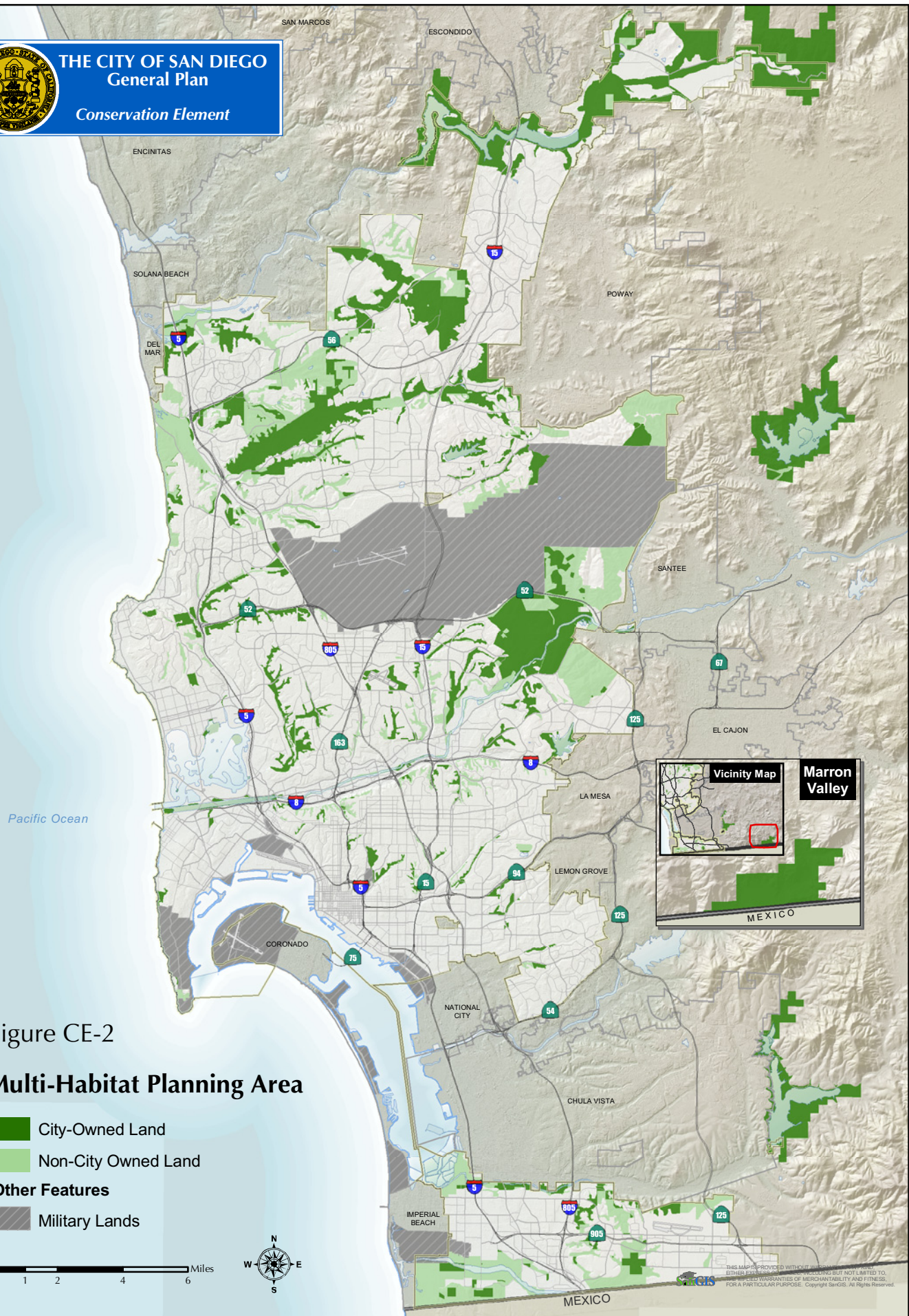
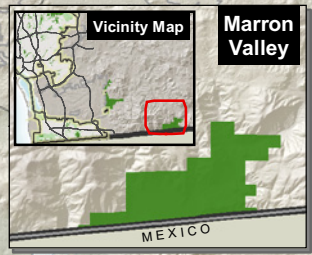


Figure CE-2

**Multi-Habitat Planning Area**

-  City-Owned Land
-  Non-City Owned Land
- Other Features**
-  Military Lands

0 1 2 4 6 Miles



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## C. Coastal Resources

### Goals

- ◆ Coastal resource preservation and enhancement.
- ◆ Clean coastal waters by continuing to improve the quality of ocean outfall discharges.
- ◆ Enhanced public access to the shoreline and coast.

### Discussion

San Diego's environment, its coastal location, temperate climate, and diverse topography, contribute to the City's natural beauty and resources. Many of San Diego's most appreciated natural resources are located within the coastal zone. These include the City's beaches, bays, shoreline, coastal canyons and the many rivers, streams and other watercourses that drain inland areas, eventually reaching the coastal environment and waters. In the City, the Coastal Zone encompasses approximately 40,000 acres of public and private land and waters.

Development in the coastal zone in California is governed by the California Coastal Act of 1976. The Act arose out of Proposition 20, the California Coastal Conservation Initiative and responds to the public concern for protecting and enhancing coastal resources. The California Coastal Commission (CCC) is the regulatory agency established to implement the provisions of the Coastal Act. The Coastal Act directs local governments to prepare Local Coastal Programs (LCPs) in accordance with the Act's policies. These policies are designed to guide development in the coastal areas, beach and lagoon resource management, public access, low-cost visitor-serving recreational uses and conservation of the unique qualities and nature of the coast (see also Land Use Element, Section E, for information on how the City prepares and implements LCPs).

San Diego offers many coastal resources that contribute to the local economy and provide opportunities for tourism, recreation, and marine-related industry. Some of the most prominent coastal uses in San Diego include:

- *San Diego Bay:* As one of the largest natural harbors in California, it is the home of the Navy (Eleventh Naval District) and provides facilities for commercial and sports fishing, recreational activities, oceanic research, shipbuilding/repair, and wildlife habitat. Most of the San Diego Bay is under the jurisdiction of the Unified Port District.
- *Pacific Ocean Offshore Area:* The City's jurisdiction extends from the tip of Point Loma northerly to the northern boundary near Sorrento Valley, and three nautical miles seaward from the mean low tide line. This area offers commercial kelp harvesting, commercial fishing, recreational boating, oceanographic research activities, and a marine life refuge (La Jolla Underwater park) and ecological reserve (San Diego Underwater Ecological Reserve).





# THE CITY OF SAN DIEGO General Plan

## Conservation Element

Figure CE-3

### Coastal Zone Boundary

- Coastal Zone Boundary
- Area within Coastal Zone that is within the City of San Diego

0 1 2 4 6 Miles



MEXICO



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## Conservation Element

- *Mission Bay*: Originally a marshy lagoon draining the San Diego River and various canyon creeks, Mission Bay has been dredged and developed into a resource-based park to accommodate aquatic recreation: water skiing, swimming, boating, small boat harboring, and tourist-based leaseholds.
- *Coastal Lagoons*: Los Peñasquitos Lagoon, San Diego National Wildlife Refuge, Salt Ponds, wetlands in Mission Bay Park and the Tijuana Slough are a few of San Diego's remaining coastal wetlands/lagoons that provide critical vegetation, wildlife and marine life habitats both locally, and as part of the Pacific Migratory Flyway.
- *Fishing*: Many commercial and sport-fishing boats operate out of San Diego Harbor and Mission Bay. These bring in fish and shellfish both from the coastal Offshore Area and from more distant areas. For various reasons, the local fishing industry has been declining for the past 25 years, as it has elsewhere in the state.

## Policies

- CE-C.1. Protect, preserve, restore and enhance important coastal wetlands and habitat (tide pools, lagoons and marine canyons) for conservation, research, and limited recreational purposes.
- CE-C.2. Control sedimentation entering coastal lagoons and waters from upstream urbanization using a watershed management approach that is integrated into local community and land use plans (see also Land Use Element, Policy LU-E-1).
- CE-C.3. Minimize alterations of cliffs and shorelines to limit downstream erosion and to ensure that sand flow naturally replenishes beaches.
- CE-C.4. Manage wetland areas as described in Section H, Wetlands, for natural flood control and preservation of landforms.
- CE-C.5. Limit the use of beaches and shorelines to appropriate coastal dependent and ocean-oriented recreational/educational uses as identified in local coastal/community plans.
- CE-C.6. Implement watershed management practices designed to reduce runoff and improve the quality of runoff discharged into coastal waters.
- CE-C.7. Encourage conservation measures and water recycling programs that eliminate or discourage wasteful uses of water.
- CE-C.8. Protect coastal vistas and overlook areas from obstructions and visual clutter where it would negatively affect the public's reasonable use and enjoyment of the resource.



- CE-C.9. Develop an integrated system of pedestrian, bicycle, local transit and automobile access to the shoreline that will connect major coastal activity areas with a focus on the ocean and natural scenic corridors.
- CE-C.10. Work with local fishing and other coastal-related industry representatives to enhance their possibilities of economic survival in San Diego.
- CE-C.11. Integrate the many coastal resources and recreational opportunities into the City's proposed Parks Master Plan (see also Recreation Element, Policy RE-A.1).
- CE-C.12. Ensure that all City beaches and shorelines are accessible and available for appropriate public use for all users.
- CE-C.13. Acquire remaining beach and shoreline areas for public use.

## D. Water Resources Management

### Goals

- ◆ Effective long-term management of water resources so that demand is in balance with efficient, sustainable supplies.
- ◆ A safe and adequate water supply that effectively meets the demand for the existing and future population through water efficiency and reclamation programs.

### Discussion

San Diego has a semi-arid coastal climate with coastal areas receiving an average of ten inches of rain annually. The City's historically reliable water supply is credited to its ability to import and store water supplies from the Colorado River and Northern California. However, these imported water supplies are limited, and to meet the needs of population increases, economic growth, and competing regional demands, San Diego must develop additional water resources to ensure an adequate supply for present and future generations.







## Conservation Element

The City has no direct control over the imported water supply, but is a member agency of the San Diego County Water Authority (SDCWA), which is responsible for securing the region's imported water supply. Additional dedicated water supplies and increased water-use efficiency programs are needed for the region to support growth projections and industry needs. In response to imported water supply uncertainties, the City prepared a Long-Range Water Resources Plan, which defines a flexible 30-year strategy and includes evaluation tools for continued water resources planning.

The City operates local drinking water supply reservoirs that are critical components of the regional water supply system (see also Public Facilities Element, Section H). Rainfall in reservoir areas averages 15-25 inches per year. These reservoirs store imported water, provide emergency water storage, and capture rainfall and runoff that provides ten to twenty percent of the City's water supply. Water quality is threatened by the continued urbanization of watershed lands. Runoff from storms or other human activities picks up pollutants that enter the reservoirs. Watershed planning is an interdisciplinary approach that provides an opportunity to understand the relationship between land use, biology, engineering, geology, and other disciplines on a landscape level using water as the interconnecting element. It should be used to identify major water resource management issues for each area of the City and refine land use policies at the community plan level.

Pollutants of concern for drinking water include materials that are not typically addressed under storm water regulations; nutrients and related algae, organic carbon, and dissolved solids are of particular concern. To fill this gap, the City has written Source Water Protection Guidelines for New Development which help development project proponents and reviewers determine if their projects pose a threat to drinking water quality. Where a threat exists, the guidelines offer suggestions on site designs and the use of Best Management Practices (BMPs) to minimize potential problems. Applying the guidelines and reducing runoff pollution is particularly challenging, as the reservoirs and their tributary watersheds are located almost entirely outside of the City.

## Policies

- CE-D.1. Implement a balanced, water conservation strategy as an effective way to manage demand by: reducing dependence on imported water supplies; maximizing the efficiency of existing urban water and agricultural supplies through conservation measures/programs; and developing alternative, reliable sources to sustain present and future water needs.
- a. Integrate watershed planning with water supply and land use studies to achieve an integrated approach to ensure that the City can provide adequate water supplies for present uses, accommodate future growth, attract and support commercial and industrial development, and supply local agriculture (see also Public Facilities Element, Policy PF-H.1).



- b. Manage groundwater and surface water resources and capacity through an integrated approach to meet overall water supply and resource management objectives (see also Public Facilities Element, Policy PF-H.1).
  - c. Participate in advanced water treatment processes such as brackish groundwater and seawater desalination programs.
  - d. Emphasize and refine recycled water programs to help meet non-potable irrigation demands.
  - e. Develop and expand water-efficient landscaping to include urban forestry, urban vegetation, and demonstration projects.
  - f. Support regional efforts towards ensuring that imported water is reliable, cost-effective, and is of high quality.
  - g. Maintain existing and future water supply, storage, treatment and distribution facilities with minimal or no impact to the environment.
  - h. Implement conservation incentive programs that increase water-use efficiency and reduce urban runoff.
  - i. Develop a response plan to assist citizens in reducing water use during periods of water shortages and emergencies.
  - j. Encourage local water agencies to use state-mandated powers to enforce conservation measures that eliminate or penalize wasteful uses of water.
  - k. Explore alternative conservation measures and technology as they become available.
  - l. Review/update the City's landscaping regulations as needed to ensure they effectively address the efficient use of water in landscaping.
  - m. Educate the public on wise water use.
- CE-D.2. Protect drinking water resources by implementing guidelines for future development that may affect water supply watersheds, reservoirs and groundwater aquifers. The guidelines should address site design, Best Management Practices (BMPs) and storm water treatment measures.
- a. Collaborate with other jurisdictions to reduce the potential for polluted runoff to water supply reservoirs.
  - b. Enter into cooperative, voluntary agreements with other jurisdictions to enable the City to provide advisory review of development projects outside of the City's boundaries that may impact watersheds and reservoirs.





## Conservation Element

- CE-D.3. Continue to participate in the development and implementation of watershed management plans.
- a. Control water discharge in a manner that does not reduce reasonable use by others, damage important native habitats and historic resources, or create hazardous conditions (e.g., erosion, sedimentation, flooding and subsidence).
  - b. Protect reservoir capacity from sedimentation.
  - c. Improve and maintain drinking water quality and urban runoff water quality through implementation of Source Water Protection Guidelines for New Development.
  - d. Improve and maintain urban runoff water quality through implementation of storm water protection measures (see also Urban Runoff Management, Section E).
  - e. Encourage proper sustainable agricultural practices (if applicable) such as tillage, use of grass filter strips, runoff detention basins, and organic farming.
- CE-D.4. Coordinate local land use planning with state and regional water resource planning to help ensure that the citizens of San Diego have a safe and adequate water supply that meets existing needs and accommodates future needs (see also Public Facilities Element, Section H).
- a. Consider and evaluate water transfers and other cost-effective ways to increase reliable supplies with minimal environmental effects, where it benefits the City, to help achieve a balanced and integrated water conservation strategy.
- CE-D.5. Integrate water and land use planning into local decision-making, including using water supply and land use studies in the development review process.



# THE CITY OF SAN DIEGO General Plan

## Conservation Element

Figure CE-4  
San Diego  
Watersheds

### Water Sources

- Major River
- Minor River

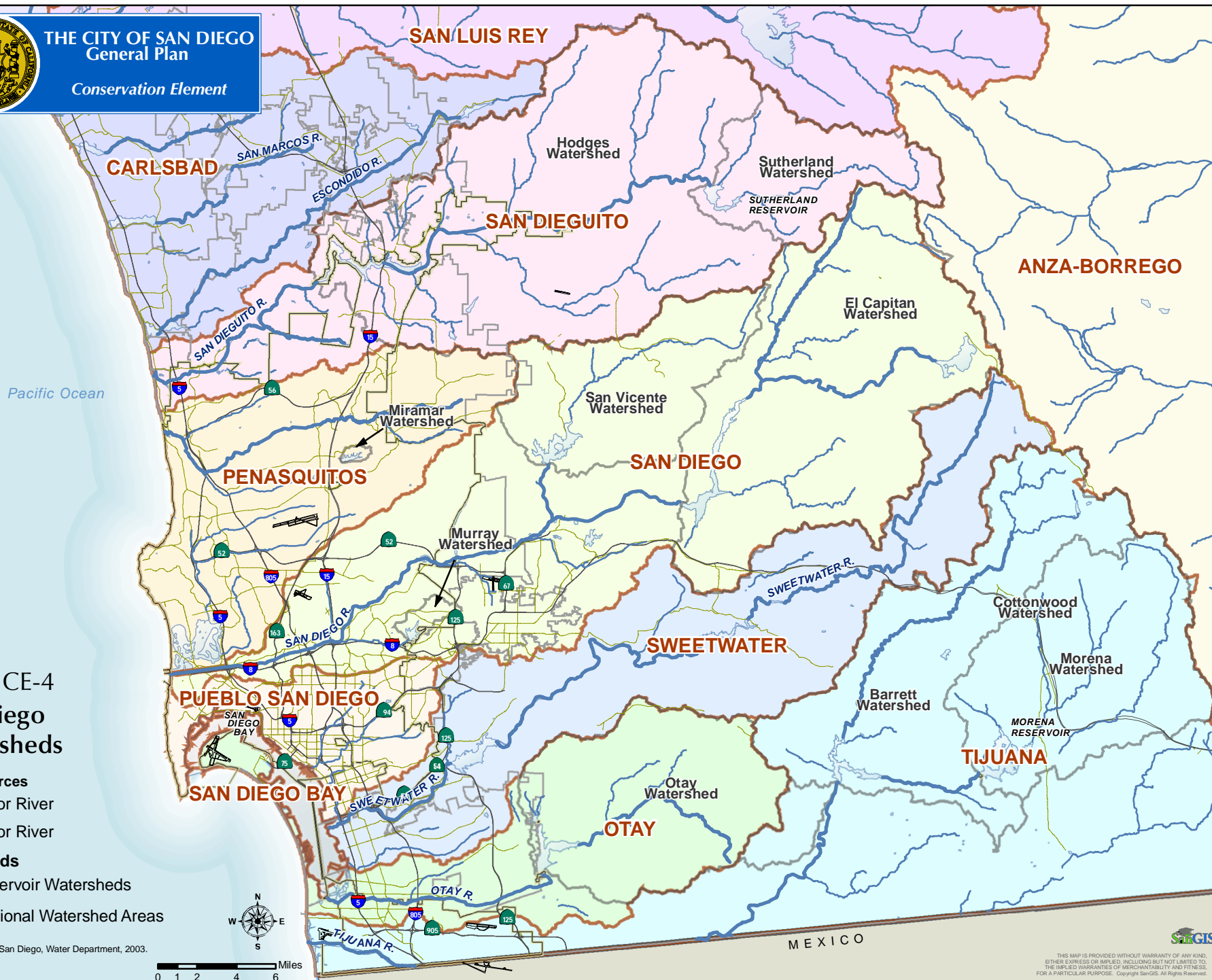
### Watersheds

**Name** Reservoir Watersheds

**NAME** Regional Watershed Areas

Source: City of San Diego, Water Department, 2003.

0 1 2 4 6 Miles



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